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BUREAU OF PLANT INDUSTRY

WEEKLY STATION REPORTS

OF THE DIVISION OF

DRY LAND AGRICULTURE

BUREAU OF PLANT INDUSTRY

U. S. DEPARTMENT OF AGRICULTURE

MAY 7 1938

Not for publication without
prior consent of this division.

REPORT FOR THE WEEK ENDING MAY 7, 1938.

HAVRE:

The mean temperature during the week was 4° below normal. Nearby mountains were snow covered most of the time. Unsettled weather with precipitation on 5 days and an occasional snow flurry kept the surface damp, hindered field work, and retarded the growth of grass. The moisture, however, will insure uniform stands and should greatly improve the range.

Experimental field activities included seeding flax in the D.L.A. project and an increase block of foundation seed. The first date of planting corn was made, and forage nurseries were sown. Row alfalfa and grasses were cultivated with a springtooth harrow. The farm department finished planting grain hay and started plowing for fallow.

L. P. Reitz of the Division of Forage Crops and W. B. Austin of the Soil Conservation Service seeded the cooperative grass nurseries. M. P. Hansmeier, Extension Conservationist, was also a station visitor.

Maximum temperature, 75°; minimum, 32°; precipitation, 0.76 inch.

JUDITH BASIN:

The past week has been rather difficult for continuous field work, owing to the heavy winds on the 2nd and 4th and falling snow on the 6th and 7th. Spring grains have been delayed throughout this area because of the cold nights and few warm days. Winter wheat appears to be strong with very good stands, but many farmers have been concerned about the lack of growth being made during the past ten days. Many fields in Fergus County which were inspected on the 5th with the County Agent, H. Ralph Stucky of Lewistown, were badly infested with weeds. Early fall seedings made prior to the late fall rains were most heavily infested. With good moisture the second biggest problem to crops in the area no doubt will be competition from weeds.

The seeding of crested wheatgrass in the west field was completed. The first plantings of cold resistant strains of corn were made as well as the small grain hays. A bulk field of approximately 9 acres north of the railroad was seeded to oats. A few increase plots were planted to Markton oats and Marquis wheat. With a few more days of good weather the remaining early seedings will be completed.

Maximum temperature, 74°; minimum, 25°; precipitation, 0.36 inch.

HUNTLEY:

The week as a whole has been generally cooler with minimum temperatures coming close to the frost line. Light showers have fallen throughout the period, and although they have not added to the soil moisture they have kept the atmosphere damp and chilly. A good rain would be of benefit to winter wheat and alfalfa which are now beginning to make rather heavy withdrawals on the moisture reserve. April precipitation was 70 percent of the average for the month, but as most of the showers were light the moisture was lost by evaporation before penetrating the soil. Crops, therefore, are dependent upon the moisture reserve accumulated during March, which penetrated to a depth of 21 to 25 inches.

All spring-sown small-seeded crops are now up and with the exception of crested wheatgrass and alfalfa are showing very good stands on all plots. Winter wheat on fallow and cornland has made a good growth and the plots are clean, whereas that on continuous cropping and the stubbling experiments is beginning to feel the competition of weeds and has made little advance. Cutworms have about entirely destroyed the winter wheat nursery, and it now appears doubtful if enough plants will recover to warrant continuing the test.

Field work has included lining and cultivating roads, cleaning volunteer grain out of the alleys, preparing corn land, and placing the hogs on the pasture experiments.

Maximum temperature, 84°; minimum, 36°; precipitation, 0.17 inch.

SHERIDAN:

Fairly heavy rain on the 1st, following rather unseasonably warm weather on the previous 2 days, provided ample moisture for current crop needs. Following the rain the entire week was cool and cloudy, with snow flurries the last of the week and a heavy freeze this morning (7th). Alfalfa was noticeably wilted by the freeze, and any chances for fruit this year probably were killed.

Station work consisted largely of hauling manure from the corrals and spreading on pasture, and plowing for late crops after the land was sufficiently dry to plow. Grass and grain made fair progress.

Soil samples taken the middle of the week showed moisture to a depth of only about 18 inches on land cropped last year and spring plowed. Fallow was moist to the depth sampled, 6 feet. Moisture apparently had penetrated nearly a foot more on fall plowing than on spring plowing.

Maximum temperature, 80°; minimum, 28°; precipitation, 1.34 inches.

DICKINSON:

High temperature on Sunday accompanied by wind and dust was followed by a shower of 0.22 inch. Much cooler weather at the end of the week resulted in hard frosts with minimum temperatures of 26° and 20° on Thursday and Friday nights.

Crops improved in appearance and grain stands thickened some. Many of the plants show effect of injury by wind. The low temperatures of the last few nights have damaged plants some in low places. Rain and warm, quiet weather are needed to offset the effect of dry surface soil and damage by wind and frost.

A few early flowering varieties of plums were in full bloom early in the week. They contained a moderate to heavy amount of bloom. A good many of the trees in the orchard were so badly injured by drought and low temperatures during the previous two winters that the fruiting wood on older trees has been greatly reduced. Little killing seems to have resulted during the past winter.

Visitors included E. G. Davis, Associate Entomologist, Bureau of Entomology and Plant Industry.

Maximum temperature, 84°; minimum, 20°; precipitation, 0.25 inch.

MANDAN:

Agronomy - Several days during the week were raw and windy and disagreeable for field work. Most of the week was spent in preparing and seeding feed fields. Oats and barley were seeded in most of field P, which is now terraced.

Most of the late fall seeding of grasses were a failure in both field P and the South field. The South field grass rotations have been reseeded, and land outside the rotations was disked and seeded to oats. Potatoes were planted in the rotations on the 6th.

A heavy frost occurred on the night of the 5th, and again on the 6th. There was little damage to grain.

Maximum temperature, 82°; minimum, 23°; precipitation, 0.22 inch.

Cooperative Grazing Experiment - Grass is greening up nicely but is badly in need of a good rain. The steers received last week are being held on the reserve pasture.

Horticulture - The severe frost (23° F.) on the night of May 6 caused considerable damage to fruit blossoms, especially apples and plums. Most of the pistils of apple and crab blossoms are brown. No results are expected from the fruit breeding work of the past week. Native fruit blossoms were not so severely damaged by the frost.

Potatoes were planted on May 6 and 7. The usual variety tests, tuber unit work, and spacing experiments are being run.

Winter injury, or rather spring drought injury, is now more apparent. Some trees show killing of one or more large branches while the rest of the tree is uninjured.

The cool and dry weather of the past week was rather unfavorable for the growth of vegetables. There has been no perceptible growth since germination, which was very good of the following: - radish, spinach, turnips, kohl rabi, peas, and beets. Turnips and radishes look black this morning due to last night's frost. Asparagus also froze to the ground. This vegetable has been yielding very well so far this spring, and with the first cutting made on April 27, has been about 10 days earlier than the average year.

All seeding and transplanting of vegetables and flowers in the greenhouse and frames has been completed. Work on the grounds, such as digging and cultivating perennial beds, borders, and shrubbery groups, has been started and will continue for some time.

Spirea arguta, Ribes aureum, Prunus triloba, and Amygdalus nana, are in bloom at the present time, as is also a bed of early tulips.

Arboriculture - A quantity of small American and Chinese elm seedlings have been lined out in the nursery and a small amount of carried over Chinese elm seed planted. Conifer seed beds of blue spruce and ponderosa pine have been prepared and planted. The surface soil is badly in need of moisture to assist emerging seedlings to break through.

The low temperatures the nights of the 5th and 6th did considerable damage to hackberry and locust seedlings. Other species show very little damage at this time. It is too early to determine the damage done to a prospective seed crop on the various species, many of which are in blossom.

ARCHER:

The weather during the week ending May 7 became colder as the week progressed. The maximum temperature May 1 was 75°, and on May 6 it was 41°. The lowest temperature during the week was 22°, recorded May 6. On May 7 the minimum was 24°. Along with these temperatures snow squalls were frequent. The precipitation was light, the total for the week being 0.11 inch.

At the present time it appears that most vegetation suffered but slightly from the cold weather. Evidently it was somewhat hardened by the gradual decline in temperature and the protection furnished by the heavy coating of frost. Grass generally made a good growth, and livestock are in good condition.

During the afternoon of April 30 a short trip was made into the winter wheat district of Nunn, Colo. Fields that were seeded sufficiently early last fall to make suitable fall growth were in very good condition. Stands were good and the crop in a number of fields was jointing. Late seedings did not survive. The soil in some of the larger late-seeded fields had blown badly, and such fields had been re-seeded to spring cereals. The winter wheat in the Nunn district is considerably farther advanced than at the station.

Station work consisted of cleaning yards, cultivating trees, repairing roads, and cleaning fence corners of dry weeds.

All farm animals at the station are now on pasture except the work horses.

Maximum temperature, 75°; minimum, 22°; precipitation, 0.11 inch.

NORTH PLATTE:

The past week was cold and windy with precipitation on three days. Field work was not very extensive, due to the rains, and consisted largely of preparing land for corn. Corn was planted on the bench land.

The annual spring feeders meeting which was held on the 5th was well attended. The crowd was estimated to be in excess of 700.

Dean L. E. Call of Manhattan, Sup't. Aicher of the Hays station, and E. H. Coles and Joe Kuska of the Colby station visited the station Thursday.

Maximum temperature, 76°; minimum, 32°; precipitation, 1.43 inches.

AKRON:

A drizzling rain started about 2:00 p.m. Tuesday, and precipitation was recorded on each of the next three days. Late Friday the rain turned to snow, and the ground was white Saturday morning.

First-date seeding of variety beans was made Monday. Date and seed treatment tests of corn were seeded the 5th. Not much other field work was possible because of rain or wet soil.

Hurley Fellows returned to Manhattan Thursday. A. C. Hildreth, Superintendent of the Cheyenne Horticultural Station, delivered black walnuts and pruned the recently set fruit trees on Friday. J. J. Curtis visited Friday and Saturday.

There was no run-off from the rainfall received at the station. It brightens the agricultural outlook appreciably. Apples and cherries in the orchard were in full bloom, and the low temperature of 28° Friday night may have injured the fruit set. However, this does not appear likely since the blossoms were covered by clinging snow during this low temperature.

Maximum temperature, 84°; minimum, 28°; precipitation, 0.99 inch.

COLBY:

This has been a windy week. This first four days were dusty with some soil blowing. There was considerable cloudiness however, and the week ended with the heaviest rain since June 1932. It started raining gently yesterday morning and continued throughout the day. The rain turned to snow in the evening, and about 2 inches of snow fell over night. It was very windy but the snow was too wet to drift. Snow flurries continued this forenoon, but as the temperature rose from a minimum of 31° at 8 o'clock to 39° by 1 this afternoon, the snow all melted.

All crops are growing nicely and appear very promising, except a number of fields of winter wheat which are being destroyed by worms. From descriptions given by farmers, the worms are probably a kind of cutworm. The damage from worms is the first experienced in this section on a large scale. Cutworms are also thick in gardens. Where the infestation is heavy in wheat fields the wheat appears brown and dead.

Maximum temperature, 83°; minimum, 31°; precipitation, 1.64 inches; snow, 2 inches. Precipitation for April, 1938, 1.22 inches; precipitation, January - April, 3.23 inches.

HAYS: (Week Ending April 30, 1938.)

The early part of the week was dry and windy. Rain broke the dry spell Tuesday night, since when conditions have been ideal for growing crops.

Most of the easily available moisture had been consumed, and wheat had just begun to suffer from shortage of moisture for the first time this spring when rain replenished the surface soil with an inch of water. Wheat immediately resumed the rapid growth it has been making all spring. Heads are high in the boot but none are out yet on the project. Only the earliest varieties on the cereal project are beginning to show heads.

Barley, oats, bromegrass, and Canada field peas, are looking fine and have a good start ahead of the weeds. Rye has been turned under for green manure. The rye was from 10 to 15 inches high and the heads were in the boot but none were out. It had begun wilting badly.

During the week blank listed ground for sorghum and corn was cultivated to destroy the weeds.

The Annual Boys and Girls Judging Contest was conducted Friday and the Annual Cattleman's Round-up Program is taking place today.

Maximum temperature, 84°; minimum, 38°; precipitation, 1.17 inches.

HAYS:

The weather during the week was generally cloudy and rainy. Some moisture fell every day. As a result it has been too wet for any tillage work during the week.

All small grains have been making excellent growth. Barley, oats, and spring wheat cover the ground and are about 6 inches high. Canada field peas are also making good growth. Bromegrass is making fair growth and bids fair to survive the season with a good stand. Alfalfa, seeded this spring, is now up to a fair stand and looks promising. Winter wheat continues making a heavy growth, and the rains during the past week have added sufficient water to the soil to carry the wheat another week or ten days.

Today ends a four-day Bindweed Eradication Conference held on the Experiment Station. The first two days attendance was made up largely of State men including County Commissioners, County Clerks, Bindweed Eradication Supervisors, from counties all over the State; Representatives from the Kansas State Experiment Station, and a few Legislators from Kansas. The last two days attendance included Federal and State Experiment Station men from several States.

Maximum temperature, 82°; minimum, 37°; precipitation, 1.56 inches.

GARDEN CITY:

Rain fell every day of this week except one. Temperatures were rather low the latter part of the week, the minimum being 34°. Five days out of the seven were dusty, and on two of these days bad dust storms occurred. Some local blowing occurred, but most of it came in from other sections.

Field work consisted of field cultivating, listing, plowing, and ridge splitting. Spring small grains and some of the winter wheat are making good growth.

Maximum temperature, 87°; minimum, 34°; precipitation, 0.95 inch.

TUCUMCARI:

No precipitation occurred, although much of the week was cloudy and threatening. Wind movement was unusually high, averaging 11.0 miles per hour for the week. Temperatures were high during the first half but dropped suddenly toward the close. Ranges and trees have shown the most development of the year, the past week, and weeds are sprouting in every nook and corner.

Fields blank listed a month ago have not been leveled, but it is the intent to throw in ridges after rain occurs. Weeds have not made much growth on listed land, but will no doubt develop fast within the next week or ten days.

Work consisted of poisoning rats and gophers; moving 15 two-foot to six-foot pine trees; seeding grasses; cultivating orchard, vineyard and tree rows; and repairing roadways.

Maximum temperature, 84°; minimum, 36°.

DALHART:

About the best or at least the most consoling thought right now is that this week is passed. Sand movement every day; sand accumulations each day; a different landscape at each lull in drifting. The station force just about held its own with accumulations about the buildings. But the vineyard started rather startling accumulations during the week, and the orchard east of the vineyard is doing the same thing. The trees along the drive which have been swept clean underneath accumulated a rather uniform drift about a foot deep, which extends across the road in places, the night of the 6th. Fields on the station are alternately covered with accumulations to just nearly swept clean. No field work has been done in seedbed preparation. This should be done but the damage that could be done by having the lister furrows fill with blow sand nearly as fast as the land could be listed rather retards the urge to do this work. The outlook is too discouraging to even write about.

Sand accumulation removal occupied the time during the week except that on two days one employee watered trees planted this spring. During the past seven springs an effort has been made to establish a perfect stand of conifers for a spacing test -- the past six of the seven years have given the worst conditions experienced for this work. After five years of especially trying conditions it was felt that we now knew how to transplant and to save young conifers. This spring a resolve was made that everything that we had learned about transplanting would be used in an effort to get the planting established as originally planned seven years ago. The plantings were made in early February for some transplanted material and in late March of some B & B material. Conditions for survival during part of March, all of April, and so far every day in May were fully as bad as any heretofore encountered. On numerous times they have been covered completely with sand, this sometimes made manual uncovering compulsory. Observation at the time of watering this week indicates that every conifer planted this spring is now alive and in nearly every instance they are verdantly green. The station employees deserve considerable credit (the writer was absent 2 of the 3 months of this period) for this accomplishment. Climatic conditions have been so bad that there is now a rather high apparent death loss in the planting among the young conifers that were heretofore well-established from efforts in preceding years.

According to authentic reports there are not so many fields blowing as in preceding years, but where they are blowing the conditions are worse than they have ever been.

Maximum temperature, 87°; minimum, 35°; precipitation, 0.11 inch. Only 2 days during the week with a total wind movement of more than 500 miles.

BIG SPRING:

Two showers were received during the week, but neither of them was sufficient to be of any value aside from settling the dust for a short time. An unusual hail storm occurred about 2 miles south of the Station. It was of short duration, but the stones that fell were exceptionally large, many of them being as large as medium sized oranges. Many roofs were badly damaged, and the tops and fenders of automobiles were dented.

Considerable planting is being done in this section but it is rather doubtful if good stands will be obtained. The high winds are drying out the soil very fast as soon as it is stirred.

Station work has consisted of preparing the rotation plots for planting. They were disked and harrowed, and some of them were staked. A block of Sudan grass was planted and other increase fields were knifed.

Maximum temperature, 88°; minimum, 45°; precipitation, 0.11 inch.

LAWTON:

The final chapter of the tragic story of the 1938 wheat crop on the station, handicapped since April 6 by freeze injury, leaf rust, stem rust, Brown wheat mite, and army worms, was written May 6 by a terrific hail, rain, and wind storm.

In the wheat variety test, located on the west end of the station, the injury due to broken stems ranges from 90 to 99 percent. All varieties were pretty fully headed. Three and one half acres seeded to pure seed of Tenmarq wheat are also a total loss. Damage to wheat on the rotation plots, located about the middle of the farm runs from 75 to 98 percent, the heaviest injury being confined to manured fallow plots.

Winter barley in the variety test and on rotation 196 was damaged 100 percent. Esaw winter barley, a short, stiff strawed variety appeared to be damaged only about 80 percent. Spring seedings of oats and barley appear to be damaged about 90 percent. In the winter oats variety test, the early maturing selections of Coker were damaged about 90 percent. Damage to Fulghum, was estimated at 75 to 80 percent, Nortex and New Nortex at 90 percent, Custis and Lee at 50 to 60 percent, and Winter Turf at 20 to 25 percent.

Corn, kafir, feterita, and sorgo on the rotation plots were badly battered but appear to have survived the storm.

Hail fell on the station property for approximately 15 minutes, and it was accompanied by rain and a high wind from the west. Several thousand dollars worth of window and roof damage occurred in the city of Lawton. Fifteen panes of glass were broken in the windows on the west side of the station barn.

The storm covered an area approximately 10 miles wide and 20 miles long within the county. Although the damage was extensive within the area indicated, reports and inquiries indicate that the hail injury was very spotted.

A heavy overwintering infestation of chinchbugs is present in small grains. This is especially true in spring barley, where some injury is developing. Nymphs of the first brood were observed May 5.

Rainfall during the past week includes 2.15 inches on the 3rd and 0.90 inch on the 6th. The total since January 1 amounts to 15.30 inches, approximately the same amount as was received from Jan. 1 to Aug. 31, 1937.

Cultivated ground that had been prepared for planting of row crops is packed hard, weeds emerge rapidly, and much extra cultivation will be necessary before seedings can be made.

WOODWARD:

The week was rather exceptional so far as weather conditions are concerned. Strong wind blew from the south all day Sunday reaching a maximum of around 30 miles per hour from 2:30 to 7:00 p.m. This was followed by 0.12 inch of rain and hail. There was rain each day from Monday to Friday and a little hail on Sunday, Tuesday, Wednesday, and Thursday. Corn blades were split, a few leaves were knocked from the trees, and a few of the wheat heads were bent over on the station, but not enough damage was done to try to make an estimate. Small areas of wheat in Harper County and in southern Woodward County were severely damaged to completely destroyed by hail.

Orange leaf rust infestation has been developing very rapidly on the wheat during the past week of moist, cool weather.

Most of the wheat on all plots except late seedbed preparation and late seeding headed during the week.

The iris, around 150 varieties, are in full bloom. With so many variations in color of blooms, they give a rainbow effect to station grounds.

Landscape and Horticultural meeting for cooperating agencies began Monday, May 2, and lasted to Wednesday, May 4. Those attending, 21 in number, included landscape specialists, district agents, home demonstrating agents, and county agents from Kansas, New Mexico, Oklahoma, and Texas. Representatives of various States and members of the station took part in the program.

Maximum temperature, 87°; minimum, 41°; precipitation, 2.41 inches.

PENDLETON:

Plowing for fallow in this area is practically completed except in the foothill areas. Seeding of canning peas continues. Total acreage of canning peas is somewhat less than last year in an attempt to reduce the surplus of canned peas. A good season will offset any acreage reductions.

Many of the grasses in the nursery are heading. Some of the native species look especially promising and probably will be increased. Throughout much of this area Poa bulbosa is increasing rapidly by natural means. It seems to have the ability to establish itself in and crowd out the downy bromegrass. Most of the Poa bulbosa is about ripe now. A few farmers are planning to collect the bulblets and seed them on their contracted acres this fall.

Visitors:

Chancellor Hunter of the Oregon System of Higher Education visited the station May 5. Virgil B. Hawk, S. C. S. spent two days during the week in the grass nursery. Harlow Parkins, Project Manager S. C. S., Athena, Oregon.

Maximum temperature, 69°; minimum, 26°; precipitation, None.

BELLE FOURCHE:

Abnormally cold weather prevailed nearly all week, and a heavy frost occurred the night of May 6. Tender garden crops and volunteer corn were badly frozen, but no damage was done to small grain, flax, or young alfalfa. Showers on May 2 and 5 softened the hard soil crust which was interfering with the emerging of flax, alfalfa, sweetclover, and grass. Considerable snow was received on May 5, but most of it melted as it fell, except where the ground was covered with vegetation.

Small grain tillered extensively during the cool weather, and winter rye is about 9 inches high where growth was not retarded by soil blowing earlier in the spring. Crested wheatgrass and gromegrass are suffering from lack of moisture, and made very little growth during the week. Soil samples taken on grass plots May 2 showed the soil to be quite dry. Spring plowed wheat plots are wet to a depth of only 9 inches, but moisture has penetrated to a depth of 16 to 18 inches on corn stubble and fall plowed plots. The first 3 feet of soil on summer fallowed land appears to be well filled with moisture.

Maximum temperature, 82°; minimum, 25°; precipitation, 0.59 inch.

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REPORT FOR THE WEEK ENDING MAY 14, 1938.

HAVRE:

Cool weather continued during the week, but vegetation in general made its best progress to date. A high wind the afternoon of May 12 caused one of the most spectacular movements of Russian thistles ever witnessed here. The landscape as far as visibility permitted was literally alive with rapidly rolling weeds. Fences were wrecked, shelterbelts filled, irrigation ditches blocked, and deep piles accumulated in cuts and around obstructions.

Planting of flax varieties, safflowers, sunflowers, certain increase grain plots, and various dates of seeding grasses, alfalfa, and corn, constituted the principal activities in the agronomy field. The corn breeding project was also planted. The farm department was engaged chiefly in fallowing, picking rocks in Field C, and burning weeds. Body measurements of 2-year-old heifers in the experimental cattle herd were taken.

Numerous visitors inspected various projects.

Maximum temperature, 72°; minimum, 30°; precipitation, 0.34 inch.

JUDITH BASIN:

The week was cool, generally, with a heavy wind on Friday the 13 causing severe soil blowing in the large fields in the Basin. Moving dirt cut a large amount of the spring wheat off and will no doubt reduce stands considerably. Practically no damage was done on the station. The first part of the week was cloudy with fair precipitation. Rain on the 10th proved spotted, with Lewistown reporting 0.71 inch compared to our 0.21 inch.

Spring grains are emerging even and with splendid stands. Plowing for corn is now in progress with the west field finished. Except for planting corn and potatoes, rotation seedings have been completed. Other seeding during the week included rates of crested wheatgrass, sweetclover varieties, and the increase blocks.

Steers for the native grass and bromegrass pastures were weighed and placed on their respective pastures on the 11th. The native grass pasture is in much better condition than this time last year. The bromegrass pasture shows the effects of the past drought years and appears at present to be the weakest since it was established.

Visitors during the week were H. R. Stucky and Harold Dusenberry, County Agents from Fergus and Judith Basin Counties.

Maximum temperature, 65°; minimum, 28°; precipitation, 0.33 inch.

HUNTLEY:

Heavy frosts early in the week severely injured seedling barley, flax, and alfalfa and slightly damaged other spring-sown grains. Barley and alfalfa appear to be recovering fairly well, but the flax is still doubtful and may have to be replanted. A dashing shower of 0.42 inch on the evening of the 9th puddled the surface soil of seeded plots, and the resulting crust is now hindering emergence of some of the late-sown alfalfa, sweetclover, and grass.

Fall grains are jointing and where the plots are not weedy are making a good growth. Competition of weeds in the stubbling and continuous cropping experiments is holding back the wheat. Winter rye in the pasturing experiment started to head, and the crop was mowed to stimulate new growth of more palatable material.

Showers have interferred with the preparation of land for corn, but this work should be completed early next week.

Maximum temperature, 71°; minimum, 25°; precipitation, 0.54 inch.

SHERIDAN:

Weather continued cool and partly cloudy over the entire week, with a sleet storm on the afternoon of the 7th, and several traces of precipitation over the remainder of the week. Crop conditions continue good.

Except for cultivation necessary immediately before planting, the preparation of land for late crops was completed. Roadways were lined and rotation alleys cultivated. The cool weather appears to keep the crickets rather inactive. A power duster and a supply of dust was obtained, but no dusting has yet been done on the station.

Maximum temperature, 69°; minimum, 29°; precipitation, 0.41 inch.

DICKINSON:

Dry weather throughout the week delayed development of all crops. High winds on Friday and Saturday caused severe soil blowing and dried out the soil water rapidly. Visibility was less than a mile a good part of the day and was cut down to 100 yards at times during strong gusts. It appears that the loss of grain stands from soil blowing in the district will be fully as great as in 1937. Rain is greatly needed for the benefit of all crops.

Grasshoppers are hatching and are very thick in places. From the numbers seen so far it appears that the infestation may be worse than in 1937.

Visitors during the week included: O. W. Roberts, Meteorologist, Bismarck, Drs. Helgeson, Booth, and Mr. Hanson, Dept. of Botany, NDAC, Fargo, Ben Kienholz and P.J. Creer, Crop Staticians, Fargo, Mr. Allred, Soil Conservation Service, Rapid City.

Maximum temperature, 72°; minimum, 25°; precipitation, 0.09 inch.

MANDAN:

Agronomy - Plowing for corn in the rotations has been completed and the land prepared for planting. Corn varieties and seed blocks have been planted. Oats and barley for feed in field P are coming up.

No rain of value fell during the week. Grasses are drying up badly in the fields, and those on the prairie are making little growth. Wind has blown hard for the past three days, and the air has been filled with dust. Friday the 13th was the worst day this spring for dirt blowing, and today is nearly as bad. So far soil blowing has done little damage on the Station.

Maximum temperature, 70°; minimum, 28°; precipitation, 0.11 inch.

Horticulture - Fruit breeding has been in progress throughout the week. Severe frosts in the early part of the week and high winds in the latter part have hampered this work. The frost killed a large percentage of apple and crabapple blossoms and a smaller percentage of plum blossoms. Early blooming varieties were most severely damaged. Also blossoms on trees suffering from drought seemed to be more severely damaged than those on trees making a moderate growth.

Cutworms are numerous this spring and have done considerable damage to young seedlings in the nursery. Poisoned bran is being used to check them.

Other work included watering trees planted this spring and pruning.

The second planting of vegetables in the acre garden was completed during the week. Germination of early planted varieties is slow and spotted except in the coulee garden, where everything planted is up with a good stand.

Work on the grounds has consisted of cultivating shrubbery groups about the grounds and combating Taraxacum officiuale. This pest is unusually vigorous and obnoxious this season.

Lilacs in sheltered places, where they escaped the recent frost, are commencing to bloom, and the Hope crab has been in extraordinary glory during the week. The latter, being absolutely hardy and very floriferous, is a very choice ornamental for this region.

Arboriculture - Conifer seed beds have been completed. American elm seedlings have been irrigated. Chinese elm seed was planted during the week.

Frost damage the end of the previous week, was much more severe than appeared at the time of writing the last report. Seedlings of some species were entirely destroyed, and there appears very little prospect of sufficient further germination to establish a stand. Cutworms are also doing heavy damage in all fields. Present conditions of high winds, drought, cutworms, and frost are decidedly unfavorable for producing nursery stock.

BELLE FOURCHE:

The week was comparatively cool and windy. Showers on May 10 and 11, were too light to be of any value, except to soften the soil crust. Strong winds caused rapid drying of the soil, and vigorous growing hay crops and fall grains have utilized practically all available moisture in the soil.

Alfalfa and sweetclover are beginning to make a vigorous growth, but crested wheatgrass is firing badly. Winter rye is on the verge of heading, but rye stubbled in after winter wheat is burning, and the crop is beginning to burn on sorgo ground. All early spring crops made an unusually vigorous growth, but they will soon be suffering from lack of moisture if rain is not received.

Field work included duckfooting and harrowing corn plots, planting corn, manuring corn and fallow plots, cultivating alleys, and staking roads for trimming plots.

Maximum temperature, 72°; minimum, 28°; precipitation, 0.25 inch.

ARCHER:

During the greater part of the week the weather was cool and at times threatening. Crop growth was slow, and the leaves of the trees showed but slight growth. Wheat, oats, and barley have produced good stands. Increase seedings of crested wheatgrass have emerged, and alfalfa and sweetclover on the rotation plots are emerging.

During a trip through the Albin and Yoder districts of Wyoming May 11 it was observed that in the Albin district the present crop outlook is good, however, winter wheat is not so advanced as in the Nunn district of Colorado. The winter wheat in the Yoder district was even more backward. Considerable damage to the winter wheat in the Yoder district had been caused by soil blowing. At Yoder fallow tillage is receiving serious consideration. Two home-made machines were observed at work in fields covered with tall stubble. These machines stirred the soil to a depth of about 4 inches. When the tractor was driven in intermediate it was difficult, at a short distance, to see that the soil had been stirred. The object of the tillage machine is to keep the trash in place at the surface of the soil. No winter wheat was observed in the district east of Chugwater where, a few years ago, a considerable acreage was grown. During the trip it was observed that strip farming is quite generally practiced.

Director W. L. Quayle visited the station May 11 and 13.

Maximum temperature, 67°; minimum, 27°; precipitation, Trace.

NORTH PLATTE:

The week was cool with considerable cloudiness and strong winds. Rain was recorded on two days. Small grains continued to make excellent growth. Rye was beginning to head and has been plowed under where used for green manure. Winter wheat heads are in the boot. The growth on fallow is rank, but no lodging has as yet occurred.

Corn planting has been delayed by low temperatures, but the D.L.A. plots will be planted during th coming week.

Maximum temperature, 72°; minimum, 34°; precipitation, 0.20 inch.

AKRON:

The week has been cool and partly cloudy, very favorable for the emerged winter and spring grains. A temperature of 30° last Saturday night does not appear to have injured the fruit set in the orchard.

Sod grasses about the building site are showing what has been looked for the past three springs, the occupation of some of the wide expanses of bare ground. Bright little tufts of buffalo grass are definitely showing on these areas this spring. This is very surprising in view of the hot, dry summer and fall experienced last year.

The new forestry was cultivated, and the weeds were hoed from around the little trees. More stubble land to be seeded to corn in large blocks was disked, and all such land staked preparatory to seeding. Rotation rye plots were plowed Friday. Stands were good, but the crop was not uniform in its stage of development. Most advanced plants stood about 16 inches tall with the head in boot. One hundred and thirteen grass varieties and strains were in triple replicated rod rows.

E. W. Knoble of the Division of Chemistry and Soils arrived during the week to resume his work of surveying this county.

Maximum temperature, 72°; minimum, 30°; precipitation, 0.22 inch.

COLBY:

This week was generally cool and cloudy with some fairly heavy rains in this vicinity, but none here. The temperature dropped to 30° on the morning of the 8th. There was a heavy frost, and ice formed in the surface of the very moist ground, but the only plants nipped were some of the thistles and tender garden plants such as tomatoes. There was no apparent damage to fruit or field crops. Along some of the creek bottoms the tips of alfalfa plants turned black.

All crops have made very excellent growth since the heavy rain of last week. The wheat is thin in places but otherwise appears to be in ideal condition. Some of the earliest varieties are beginning to head. It appears that all the wheat will head early with a medium growth of straw. There is no subsoil moisture, however. Soil samples show that even on the plots which were fallow three years practically all the moisture has been used except what fell last week. That penetrated down almost a foot. Pastures are green, but not with grass.

The fallow plots, except those which are scheduled to be worked some other time, were plowed or otherwise worked this week. The ground was wet and a good job of plowing was done. On the stubble plots there was a good stand of thistles about 3 inches high. These were using the moisture rapidly. The rye plots were also turned under. The stand was thin, much thinner than the winter wheat, and averaged from 12 to 18 inches high. It was partially headed.

Maximum temperature, 77°; minimum, 30°; precipitation, 0.02 inch.

HAYS:

The weather during the week was cloudy, very damp, and for the most part calm.

Conditions have been ideal for plant growth. The only change that could have made it more favorable would have been a little higher temperature. Higher temperatures, however, with the same humidity that has prevailed would have probably caused a more rapid and heavier development of red rust, which is already heavy on some of the wheat.

Generally the wheat on fallow and on the plots receiving early preparation has developed more culms and is farther advanced than on late prepared plots on which the stand is thinner and on which the plants are now more leafy. The latter are much more heavily infested with red rust.

Wheat on fallow now ranges from 16 to 24 inches high, the more even plots average at about 17 to 18 inches and are very uniform, excellent color, and have little rust. On early prepared continuously cropped ground it varies from 10 to 18 inches high, some of it is more or less uneven growth but will average about 14 inches high and this also has a good color, and about the same amount of rust that is found in wheat on the fallow. On some of these plots, however, the growth is quite uneven. Wheat on later prepared ground is from 6 to 14 inches high and is thinner and more spotted and uneven in growth. It is more leafy, a little later developing seed stalks, and is much more heavily infested with rust. Continuously stubbled-in wheat on plot 591A is interesting in that a good stand was secured, and every plant is now developing a single culm or very few at most. These are about 10 inches high, uniform, and have a good color. The plot is grassy, but the wheat has a good color. Continuously stubbled-in wheat on plot 8, block 15, field C, is not nearly so good. It is from 6 to 10 inches high, uneven in growth, more leafy and badly infested with rust, whereas on plot 591A the infestation is very light. The wheat on corn stubble ground looks much the same as that on early prepared wheat stubble ground. On kafir stubble plots the wheat has tillered less, and is shorter but looks very promising for yields, somewhat smaller than yields on corn ground. The wheat drilled on kafir stalk plots in field C varies greatly, and although the wheat is more streaked than it is on kafir stubble plots, it looks

fair. It is more heavily infested with rust. In field D, the wheat drilled in milo and in kafir stalks does not look so good. The stand is spotted and growth is much more spotted and is more leafy, and the rust infestation is heavy. On the project no heads of wheat have emerged.

Barley is from 10 to 12 inches high, oats from 6 to 10 inches, and both crops are thick and the growth is very even. Spring wheat is from 6 to 8 inches high, and the growth is very even but not so thick as the other spring small grains. Barley and oats have the weeds smothered to the extent that it seems impossible for weed growth to become a factor with these crops this year. Canada field peas are about 7 inches high and even over all the plots. Bromegrass continues to look promising. Alfalfa plots were reseeded, the first seeding having failed to produce a good stand.

A freeze on the morning of the 8th when temperature dropped to 28° killed such garden crops as tomatoes and beans, many weeds such as redroot, Russian thistles, and the tops of lambsquarter; the top growth of grape vines; and the outer leaves on many trees. There is some fear that the wheat has been damaged. It killed the tips of the leaves and the tips of the beards of the wheat that was headed or partially headed, but we are not sure the wheat is seriously damaged, if it is damaged at all. There is no blackening of the stems at the joints as reported in the south where the freeze is reported to have damaged so much wheat.

Black rust reported in the south the middle of April has not been observed on the project or in the vicinity.

Maximum temperature, 76°; minimum, 28°; precipitation, 0.06 inch.
Last killing frost, May 8.

GARDEN CITY:

Wind velocities remained rather low this week, and dust occurred on only two days. On both of these days, the dust rolled in from the north, and one was recorded as "bad". The temperature dropped to 33° one night, and the young thistles were nipped by frost in the lower places. The only measurable amount of moisture that fell this week was 0.02 inch, and on four days, traces were received.

Thistles are making a good growth on many of the wheat plots, because of thin stands, which will reduce the already small chance of a crop.

Maximum temperature, 83°; minimum, 33°; precipitation, 0.02 inch.

TUCUMCARI:

Wind movement was low, skies were overcast much of the time, and temperatures were moderate, but in spite of favorable indications for rain only 0.12 inch was received. Precipitation totaling 2.69 inches this year to date is about 1.5 inches below normal for the period.

Wheat on the plains to the south is rapidly deteriorating, with the majority of fields damaged past recovery. Farmers and ranchers 50 miles north of Tucumcari are beginning a poisoning campaign in the attempt to eradicate young grasshoppers when they first begin feeding, before they have time to spread. At Nara Visa, in this county, there has been received 170 tons of bran, 3,000 gallons sodium arsenite, and some 100 tons of sawdust.

During the week spring plowing was performed, spring cultivation of fall plowed plots was completed, manure was hauled to plots, and a large acreage of early listed land was "thrown in".

Maximum temperature, 84°; minimum, 39°; precipitation, 0.12 inch.

DALHART:

The wind velocities were not so high nor were they as sustained as they have been in the preceding four weeks. Sand movement was not especially bad during the week. There were some additional accumulations in the vineyard and in the trees along the drive. Monday and again Friday night the movement of soil by the wind was severe.

This cessation of sand movement furnished the incentive to start farm work. All of the south field other than seedbed studies was listed. Plots that will not be immediately plowed were strip cultivated, and two days were devoted to plowing rotation plots. Unless soil movement is severe it is the present intention to continue with the plowing the coming week. There still remain several drifts to be removed.

Maximum temperature, 83°; minimum, 31°; precipitation, 0.07 inch. Rainfall to date for this year is 2.00 inches. This is approximately 51 percent of the 31-year average of 3.91 inches for the same period.

BIG SPRING:

Another week has passed with only a light shower to take the place of a badly needed rain. On several occasions good prospects were in sight, but they developed into dusters.

Two wheat plots, both on disked cowpea land have prospects of maturing a little grain, but the others are beyond recovery. It is very doubtful if more than a very small percent of the wheat in the county will be harvested, and that will produce very light yields. Trees and shrubs are making an effort to come back after the April freeze, but their progress is rather slow because of the lack of soil moisture.

The rotation field and the cooperative plots were staked during the week, and peanuts and Sudan grass were planted in the rotations, but it is rather doubtful if they will emerge to good stands.

J. M. Jones, Chief of The Division of Range Animal Husbandry of the Texas Station was a visitor May 8.

Maximum temperature, 93°; minimum, 44°; precipitation, 0.05 inch.

LAWTON:

Cultivated fields dried slowly following the rain and hail storm of May 6. The surface soil is packed hard, and tillage is necessary before any planting can be done. Sorgo plots in field A were replanted May 12. Replanting of the grain sorghum variety test, first planted April 19, was also made on the 12th because of hail and erosion damage. A rain of 0.37 inch on the night of the 12th prevented additional planting or tillage during the remainder of the week. Planting of the chinch bug sorghum project and all cotton projects was again delayed by a rain of 0.37 inch on the 15th.

The rainfall on May 12th varied from a shower to as much as 4 inches within the county. Severe hail injury was also reported in several communities.

If maturity of wheat approaches somewhat normal development, it is quite probable that some harvesting will be necessary on the rotation plots. Spring oats and some of the winter oats will also justify harvest, in all probability. The early wheat harvest that was anticipated all spring appears to have been reversed, in fact, a good deal of it may be later than normal. The reaction of the crop to hot weather, should it appear toward the end of the month, is yet uncertain.

Stem rust is present over a wide area in the State, but development has apparently been retarded by a mean temperature that was a little below normal.

WOODWARD:

Climatic conditions were favorable for field work. Spring plowing for sorghums was completed. Hairy vetch and Austrian winter peas were plowed under for green manure. Vetch hay was harvested. Both vetch and peas did very well this year. The roots were well covered with nodules.

Soil moisture samples on winter rye and wheat indicate available moisture to the following depths:

Rye on late fall plowing, 4 feet;
Rye on early plowing, 5 feet;
Rye on fallow, 6 feet;
Rye on early listed, 4 feet;
Fallow and wheat on fallow, 6 feet plus.

On heavier, red bed soil shallow, late fall plowed plots have an abundance of available moisture in the first foot but very little or none below this, and early plowing, deep, has plenty available moisture to a depth of 2 feet.

Owing to damage by hail on the 5th and frost on the 8th, about one-third of the tomato plants were replanted. Corn blades were damaged by the hail and yellowed by the frost but it is recovering.

The botany class of the Hays Teachers College spent a day studying plants on the station. Mr. Savage had 100 men at a range school.

On a trip to Pampa, Texas, it was noted that between Miami and Pampa wheat was about 10 inches high and dying from drought. Between Borger and Spearman much of the wheat failed to come up until spring and is still in the winter stage. From a little beyond Perryton into Woodward it is splendid. About Woodward much wheat was set back at least two weeks by too late pasturing. Wheat is the prettiest thing on the station, 42 inches high and headed.

A number of bids are expected on the dam, as all plans and specifications have been taken out by contractors.

Maximum temperature, 82°; minimum, 33°; precipitation, 0.02 inch.

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WEEKLY STATION REPORTS

OF THE DIVISION OF

DRY LAND AGRICULTURE

BUREAU OF PLANT INDUSTRY

U. S. DEPARTMENT OF AGRICULTURE

MAY 21 1938

Not for publication without
prior consent of this division.

REPORT FOR THE WEEK ENDING MAY 21, 1938.

HAVRE:

Cool weather, attended by precipitation on four consecutive days, characterized the week. Wind movement, while steady, attained no high velocities. Grass and winter grains made excellent growth, winter rye being about 18 inches tall and in the boot.

Experimental field work was delayed by wet weather, activities including fence, machinery and building repairs. Preparation of land for corn and plowing for summer fallow were completed.

Summer fallowing, fence repair, burning thistles, and irrigating alfalfa fields summed up operations on the general farm. Livestock pens and barns were cleaned and repairs to cattle lot fences continued.

E. G. Davis of the U. S. Entomological Laboratory, Bozeman, made a spring survey of grasshopper egg survival.

Maximum temperature, 69°; minimum, 32°; precipitation, 0.45 inch.

JUDITH BASIN:

Not since 1924 has the station received so much precipitation in the first 20 days of May as this year. At present we lack but 0.35 inch to equal the normal for the first five months of the year. Temperatures have continued to remain low, and very little growth of the small grains has been made during the week. Grasses and weeds are making the best growth at present. Prospects of an excellent hay crop are assured with the present available moisture.

Plowing for corn in the rotations was completed before the rains, and the plots will be seeded as soon as possible. Rotation potatoes were planted on the 17th. Cultivation of the shelterbelts was started, but much work remains to eradicate the large growth of weeds present.

Maximum temperature, 65°; minimum, 33°; precipitation, 1.94 inches.

HUNTLEY:

Rains have kept teams out of the field since Monday. A drizzling rain began Monday night and continued almost without interruption until Friday noon. The total precipitation was 2.74 inches. The manner in which the rain fell, together with the condition of the soil resulted in a high percentage of absorption. No run-off was observed on any cultivated field or on grassland.

Aside from adding to the soil moisture reserve, the rain was beneficial in soaking up the heavy crust which had formed following the shower of a week ago. This has permitted seedling alfalfa and flax to emerge, and stands have been considerably increased.

A white frost at the close of the week seemingly did little damage to field crops but injured lilacs and spirea which are just coming into bloom.

Maximim temperature, 74°; minimum, 30°; precipitation, 2.74 inches.

SHERIDAN:

Rain on each of the 4 days from the 16th to the 19th, with a heavy hail and rainstorm on the afternoon of the 18th, and rain almost continuous from then until the morning of the 20th, prevented much field work over the week. Hail and rain the afternoon of the 18th amounted to 0.68 inch. Grain and other small vegetation was beaten to the ground, but apparently no particular damage was done. The storm was about twice as heavy in Sheridan, and considerably more damage was done. With skies clearing rather slowly and the temperature remaining fairly low yesterday and today, the surface is drying slowly with a minimum of crust forming. Apparently there was little run-off except on steep slopes and from roads and alleys, which caused some washing in the plots.

Fruit stock was received from Cheyenne the first of the week, and planted before the rain. Vegetable plants were received the 20th, and some were planted today. Extension of the sewer line through the pasture was accomplished while other work was being held up. Except for the presence of Mormon crickets, crop prospects now appear better here than for several years, with a hay crop practically assured.

Maximum temperature, 70°; minimum, 31°; precipitation, 3.88 inches.

DICKINSON:

The dust storm which ended the first of the week was followed by a 4 day rain which has greatly changed the crop outlook. This began Monday night and continued until Friday morning. Precipitation recorded each day was: 16th, 0.25 inch; 17th, 0.39 inch; 18th, 0.40 inch; 19th, 0.69 inch; and 20th, 0.19 inch. This rain covered the whole State but was heavier in the southwestern section which has been dry so far during the season. There was no run-off. On cultivated soil the water penetrated into the third foot and on old pasture sod just into the second foot.

Grain crops are all greatly improved in appearance since the rain. Garden crops which had emerged are now growing rapidly. Early corn planted in the garden has a good stand.

Grass and alfalfa nursery varietal plots, flax and corn varieties, and corn increase fields will be seeded as fast as the weather permits.

A grass mixture was seeded in the pasture where a fall seeding failed. Grass also was seeded on the grounds where some thinning had occurred the past few years.

The Western North Dakota Livestock meetings held in Dickinson early in the week were well attended.

Visitors included Dr. J. H. Shepperd, NDAC; H. L. Westover, Washington, D. C.

Maximum temperature, 66°; minimum, 38°; precipitation, 1.92 inches. Precipitation to date in May is 2.26 inches.

MANDAN:

Agronomy - The important news of the week is that good rains started on the night of the 16th and extended to noon of the 20th. A total of 2.03 inches fell at the station and 2.66 at the pasture. The daily recordings for the station were: 17th, 0.41; 18th, 0.42; 19th, 0.04; 20th, 1.00; and 21st, 0.16. The nature of the rain was such that there was practically no run-off. The soil is well soaked at present. It is wet down to nearly 2 feet in stubble land to be fallowed.

Corn in the rotations was planted on the 16th.

Young grasshoppers are very thick in spots and are already doing some damage.

Maximum temperature, 67°; minimum, 39°; precipitation, 2.03 inches.

Cooperative Grazing Experiment - Pastures should improve rapidly following the good rains. Grass is in fair condition for grazing at present.

The cattle have been branded and the initial weights taken.

Prof. Thompson of the N. Dak. Agricultural College, visited the station on the 18th and graded the steers.

Horticulture - All horticultural plantings will be greatly benefited by the rains of the past week, but the set of fruit may be somewhat lessened by the long period in which bees could not work in the field. However, most fruits were practically through blooming when the rain came.

In the coulee garden, where the soil is very sandy, there was some soil blowing during the recent high winds. Resultant damage to early varieties of vegetables and plants set out from hotbeds is becoming very much in evidence. The recent rains are expected to materially benefit these plantings.

French hybrid lilacs in protected situations are now coming into full bloom. President Grevy, Vivian Morel, Jeanne D'Arc, Papa Joly, and Madame Casimir Perier are among the best. Charles X in every location planted had the flower buds killed.

Early tulips are now almost gone but the Darwins are at their best. Tatarian honeysuckle, native hawthorn, and others are adding their blossoms to the display mentioned last week.

Visitors for the week included H. L. Westover, Division of Forage Crops and Diseases; A. D. Stoesz, Soil Conservation Service; M. A. Bell, Northern Montana Branch Station, Havre, Montana; and E. J. Thompson, Animal Husbandry Division, North Dakota Agricultural College.

BELLE FOURCHE:

Cool, cloudy, unsettled weather prevailed the greater part of the week. Light showers were of frequent occurrence, and a steady rain of 0.59 inch was received May 18 and 19. Much heavier rains occurred a few miles south of the station and also over a large area of the range land north of Newell, which has been very dry all spring.

The rain and cool weather afforded temporary relief to hay crops and winter rye, and winter rye apparently will be able to head. Winter wheat was beginning to show signs of suffering from lack of moisture before the rain. Flax, spring wheat, oats, and barley continued to make a vigorous growth, but only a small amount of available moisture remained in the soil on spring-plowed land, when soil samples were taken on May 16.

Field work included trimming plots, duckfooting roads, plowing fallow, and planting potatoes.

Maximum temperature, 73°; minimum, 34°; precipitation, 0.75 inch.

ARCHER:

On May 16 and 17 the temperature reached 70°, but the remainder of the week was rather cool. During the week there were a number of local showers of considerable importance, but the station received only sprinkles and mists until the afternoon of May 20 when a general rain totalling 1.28 inches occurred. The total precipitation to date for May is 1.83 inches.

Winter rye and crested wheatgrass, which had produced a rank growth, showed the need of moisture before the rains of this week. The Chinese elm is leafing. The caragana and the Tatarian honeysuckle were killed back more than was suspected.

Work at the station consisted of duckfooting and planting the corn and potato plots. About half of the silage corn acreage had been shallow-listed when the rain prevented further field operations.

Maximum temperature, 70°; minimum, 34°; precipitation, 1.72 inches.

NORTH PLATTE:

Cool and cloudy weather prevailed during the week. Light showers fell the first part of the week, and a heavy rain accompanied by some hail fell Thursday night. Some damage was done to the crops on the dry land station, particularly to the small grain nurseries and winter wheat varieties. The oats and barley in the nursery appear to be a total loss, but they may revive to some extent in a few days. The crops on the D.L.A. plots were damaged but not seriously.

Early winter wheat varieties are headed, and probably all the winter wheat will be headed by the first of June. This will be a few days earlier than normal. A trace of orange leaf rust can be found on the wheat but will not be a serious factor in decreasing the yield of grain.

The work of the week consisted mostly of planting corn on the table. Most of the D.L.A. plots are seeded, and the corn planted on the bench is emerging. Corn planting has been much delayed throughout the State by wet weather.

Maximum temperature, 75°; minimum, 41°; precipitation, 1.23 inches.

AKRON:

The week has brought cloudy, cool weather, and precipitation over northeastern Colorado with devastating hail in some sections. A rain of 0.17 inch early in the week did not interfere with field work. Drizzling rain late Friday evening amounting to 0.74 inch made the soil entirely too wet for field work this Saturday morning.

Spring grains appear to be satisfactorily ahead of weeds. Bare spots on the winter wheat plots give no present indication of becoming excessively weedy. Winter wheat, even that seeded on fallow was beginning to show a shortage of available soil moisture prior to this week-end rain. The effect on plots that had good stands was to emphasize border rows sharply. Stubble and cornland-seeded winter wheat plots began to assume a sickly appearance.

Corn was planted on land to be in experimental plots next year. Tractor and duck foot, peacock, or rod weeder followed by harrow was busy practically all week preparing land for fallow, and weeding land worked in the fall or earlier this spring, this latter to be seeded to late spring seeded crops. Regular date seedings of corn, beans, and millets were made. Rotation fallow plots will be plowed early next week, thistles and volunteer grain now indicating such action.

Vanhoutte spirea and Persian lilac were injured by early growth and freeze, the former will not bloom and the later only sparingly. Mock orange is blooming heavier than usual. Deciduous trees are in full leaf. There appears to have been a good set of sour cherries on the old cherry trees.

Visitors included Roy Kimmel, Regional Federal Coordinator; R. I. Throckmorton, Kansas State College Agronomist; R. R. Bryan, Plant Breeder of Australia; and Rodney Tucker, State Extension Agronomist. J. J. Curtis came down Friday and started seeding the hybrid corn variety experiment.

Maximum temperature, 79°; minimum, 40°; precipitation, 0.91 inch.

COLBY:

The weather was mostly cloudy this week, fairly cool, and generally favorable to crop growth, but there was very little rain. Nearly a quarter of an inch fell last night. This was accompanied by a smattering of hail and much wind. Practically no damage was done here and from here south. The north half of the county was almost completely hailed out. The reports are that the area of very severe damage covers a strip almost 20 miles wide from north to south and about 80 miles from west to east, beginning across the State line in eastern Colorado and cutting across the north half of the second tier of counties from the Nebraska line. It is probably the most extensive severe hail storm to strike this vicinity in many years. The amount of insurance was comparatively small.

Winter wheat on the station made excellent growth during the week, but it has taken on that bluish tinge which is indicative of a shortage of moisture. On the fallow plots the edges are showing taller than the main body of the plots. On some of the more advanced plots heads are beginning to protrude. The stubble plots which were not worked last fall are distinctly more yellowish green than the others, indicating perhaps insufficient nitrification last fall. The spring small grains are doing nicely. Cutworms, including the pale western, are still present in large numbers, and grasshoppers seem to be hatching in abundance. Many wheat fields are still being damaged by the cutworms. On the station there is evidence of some damage by the pale western cut worm in Rotation No. 406. Field peas were turned under yesterday. The stand was good, but the growth was not heavy. The vines were about 8 inches high and were beginning to bloom.

Prof. Throckmorton and Mr. Kimmel visited the station Monday. Mr. Bryan, a plant breeder from Australia, spent most of the same day here.

Maximum temperature, 80°; minimum, 45°; precipitation, 0.22 inch.

HAYS:

The weather during the week has been cloudy and damp following rains on the 16th and 17th.

Winter wheat continued slowly developing. Generally the wheat on fallow is slightly more advanced than that on cropped land. On the dry land project wheat on fallow is from 30 to 50 percent headed. on early prepared crop land from 5 to 20 percent headed, on late prepared land the amount headed does not exceed 10 percent. Wheat drilled in Kafir stalks in field D is much slower. Not as much as 1 percent of it is fully headed.

Barley is very thick and just beginning to head.

The growth of oats is very heavy, but no heads are showing at this time. Spring wheat continues making good growth but shows no indication of heads so far.

As for the winter wheat,--it seems the cards have been stacked against it from the beginning but despite that fact it is determined to make a yield of some kind, which could be fair. In the beginning there was a very limited amount of subsoil moisture, and in some places none. The condition has not been corrected. However, with the early breaking of spring and timely showers to the present date a heavy growth of wheat has developed, even though it is more or less spotted in places. There is sufficient growth for yields of from 15 to 40 bushels. This has been damaged by a 28° minimum temperature,--damaged to an undetermined extent which seems to vary greatly. The heavy rain of a few days ago was accompanied by some hail which added a slight amount of damage, but this damage probably is insignificant. Red rust which commenced developing early, but which seemed to have lulled in its development, is again developing very rapidly and now is heavy on some of the top leaves. Thus far, no stem rust has been observed. The latest observation reveals the fact that there is quite a sprinkling of plant lice on some of the wheat.

A large number of visitors have been on the station during the week. Included among them were Mr. R. I. Kimmel, Regional Coordinator, Soil Conservation Service, Amarillo, Texas; accompanied by Professor Throckmorton, Agronomist, Kansas State College; Dr. W. W. Bryan, Instructor in Plant Breeding, State Agriculture College, Q'land, Australia; and Mr. Wellington, Office of Experiment Station, Washington, D. C.

The soil has been too wet for tillage work during the week. Maximum temperature, 84°; minimum, 44°; precipitation, 2.38 inches.

GARDEN CITY:

The precipitation for the week was only 0.02 inch, bringing the total for the month to 0.98 inch. The normal for the month is 2.65 inches. Three consecutive days were dusty, but none were "bad". The dust storms this spring have not been so severe as those the past years. Most of the dust had come from the south and southwest and settled in here, but very little local blowing has occurred. The north slopes of the sandhills next to the river have recently become in very good condition to blow. They have little covering of vegetation and have done some moving lately. The south sides of the sandhills are covered with a dense growth of sagebrush which will aid in preventing blowing.

Young grasshoppers are very numerous and poison bran is being scattered for them. Spring small grains are making a good growth, but are rather small yet, due to late planting.

Station visitors were R. I. Throckmorton, R. I. Kimmel, and Dr. Monir Bahgat, Agricultural Attache to the Egyptian Legation, Washington, D. C.

Maximum temperature, 90°; minimum, 49°; precipitation, 0.02 inch.

TUCUMCARI:

The week was high in wind movement and in mean temperature, and much of the period was cloudy, but only 0.20 inch rain in a local shower was received. Very little row planting has been done, and the surface soil is drying fast. Ranges are holding up well. Wheat south of here is approaching the vanishing point.

A valiant fight is being undertaken near Nara Visa, 45 miles northeast of Tucumcari, in the attempt to destroy a very heavy infestation of grasshoppers. Some 300 tons of poisoning material has been received, and some 20 spreaders are in constant use. Exceptionally good kills have been made, but owing to the rough topography of the locality it is certain that some hatching beds have been overlooked. Localities north and east of Nara Visa are also heavily infested and work is being performed, but it seems certain that in spite of all efforts very heavy damage will result in this part of the State.

All fields early listed on the station have been "pulled in" with the field cultivator. It is still hoped that rain will occur in time to permit killing another crop of small weeds before planting. Today cotton nursery rows and peanut variety plots were planted, the only planting so far attempted.

Maximum temperature, 90°; minimum, 51°; precipitation, 0.20 inch, for the month, 0.33 inch, for the year to date, 2.90 inches.

DALHART:

This week the spring plowing was completed. Moisture has left the surface foot of soil rather rapidly during the week. Plowing could have been completed sooner but we had some plots in two strip-cropping series which were started in 1929 that had sand accumulations. By managing the plowing operation properly it was possible to have the wind remove nearly all of these accumulations, without any effort on our part other than worry. Here we have probably experienced as much sand movement as any place; we are experiencing now daily accumulations in the orchard and vineyard where three weeks ago there were no accumulations; our fields are in decent shape; weeds were raked from the pasture before the sand movement was under way this spring, but now the pasture is filled with myriads of small hummocks; soil drifts are around all buildings; sand drifts have formed around the farmstead where usually it is necessary to protect the soil to prevent erosion; we have seen conifers punished more the past 10 days than in the preceding months of this spring; we have no green growth, as the shifting, slithering sand prevents weed and grass growth, although the larger ranch pastures are green and good. We have learned only a very few new control measures in the past six springs. Soil drifting can be controlled on individual farms. The crux of the problem is best explained by an oft repeated statement of two or three years ago, which was to the effect that: "I've yet to meet the farmer in any community who lives on the farm where soil blowing started".

Maximum temperature, 89°; minimum, 49°; precipitation, 0.01 inch. The total for the year is just 2 inches more than that.

BIG SPRING:

Crop conditions were improved very materially during the week when a rain totaling 0.84 inch was received. This was accompanied by a light hail at the station, but some sections of the County report it very heavy. Fortunately there was no crop damage, as planting had not started.

This rain will start general planting throughout the county next week, as there is ample moisture in most places for emergence.

The May 15 date of planting of grain and forage sorghums was planted on the 16th, and they are now emerging. Peanut, cowpea, and soybean varieties were also planted during the week.

J. M. Jones of the Texas Station is here today to assist in closing out the years feeding experiments.

Maximum temperature, 98°; minimum, 64°; precipitation, 0.84 inch.

WOODWARD:

The week ended with cool damp cloudy weather in a torrential rain Wednesday afternoon, 0.96 inch in about an hour and a half, was followed by drizzling showers throughout the afternoon. A heavy downpour set in around 6 o'clock. Station report for the period, 1:30 p.m. to 8:00 a.m. the following morning, was 2.91 inches, and the report from the weather station down town was 3.50 inches for the same period.

Basin listing did not look so good following the heavy rain. Most of the dams on plots not contoured were broken. Basin listing on the sandier types of soil appears to have eroded more than on the heavier soils. Contoured basin listing on sandier soils filled in more than on heavier soils basin listed.

Wheat prospects look very good at present. Some of the visitors are estimating wheat yields, on the better seedbed preparations, to be around 35 bushels per acre. Of course their estimates are based on the appearence at the present.

Cotton came up during the week. Corn is not doing as well as it might under warmer weather conditions. Much of the corn in the lister furrows was covered by the heavy rain. The corn was uncovered by hand, leaving a good stand.

All the plots that have no crop at present were tilled with the one-half cultivation method to prevent wind erosion. Fallow plots on the new place were field cultivated, since they are on tighter soils and tend to crust more. Other work on the station consisted of cultivating fields and windbreaks, rebuilding terraces, and resetting tomatoes.

Approximately 15 county agents and vocational agriculture teachers attended the field tour on the station. Particular interest was shown in the Austrian winter pea and hairy vetch rotations with wheat, basin listing, and various implements used in preparing the seedbed.

Maximum temperature, 85°; minimum, 49°; precipitation, 3.44 inch.

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U. S. DEPARTMENT OF AGRICULTURE

MAY 28 1938

Not for publication without
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REPORT FOR THE WEEK ENDING MAY 28, 1938.

HAVRE:

Higher temperatures, partly cloudy skies, and precipitation on five days typified the weather during the past week. Rainfall thus far in May has totalled 2.13 inches, being somewhat above normal. The general condition of crops ranges from good to excellent.

Activities in the experimental field consisted of planting corn, beans, potatoes, and alfalfa. Certain sweetclover and winter rye plots were turned under for green manure. Cultivation of alleys and cereal nurseries is in progress. Early sown corn has emerged. Flax and grasses are up with uniform stands. Fallowing in field C was completed, and breaking sod in the calving pasture to be planted later with winter rye, followed by crested wheatgrass was begun. An increase field of crested wheatgrass was also cultivated.

Livestock activities consisted of branding and vaccinating calves. The cow herd is being turned into the lake bottom pasture for the first time. Grass made its best growth to date.

Visitors included Director J. C. Taylor of the Montana Extension Service; R. D. Mercer, Extension Agronomist; and Harold Larson of "A.A.A."

Maximum temperature, 89°; minimum, 47°; precipitation, 0.58 inch.

HUNTLEY:

Excellent growing conditions prevailed throughout the week, and all crops made considerable advancement. The winter wheat on fallow and cornland looks particularly well, whereas that on continuous cropping shows some improvement over its condition of a week ago.

Spring grains, with the exception of flax, have seemingly recovered from frost injury and most plots look about normal. Stands of flax are still thin as a result of loss of the first seedlings to emerge, but it is possible that plants now coming up will make it unnecessary to reseed.

Corn planting was completed between showers early in the week, and conditions appear to be favorable for prompt germination. All plots were harrowed soon after planting, to break up the crust that formed after the last shower and to kill small weeds which were sprouting.

Owing to two weeks of rainy weather which kept the soil too wet to work, weeds have gotten a long start on control operations, and such makeshift methods as mowing and burning have been used to hold the seedling growth in check until tillage can be used to kill the plants. Portable weed burners have been found to be rapid and efficient tools with which to destroy the seed-heads of downy bromegrass and fan weed growing in the fence rows and other places where tillage control measures are slow.

Maximum temperature, 88°; minimum, 43°; precipitation, 0.25 inch.

SHERIDAN:

Light showers each day, with one heavy dash of hail, prevented any field work of consequence until the 26th. Small grain just emerging, and plants set out shortly before the hail, were damaged considerably. Temperatures remained comparatively cool until the 27th, when it warmed up considerably.

Growth of grain and grass continued good, but growth of garden crops continued slow on account of cool weather. Seeding of flax, and planting of corn, except that to be listed, and of potatoes, was completed.

Crickets were dusted on three successive days on the east part of the station where they were coming in thick, rain washing the dust away on both of the first two days. There appears to have been a fair kill, those in the areas dusted being thinned out considerably today.

Maximum temperature, 86°; minimum, 36°; precipitation, 0.45 inch.

MANDAN:

Horticulture - Most trees and shrubs have been making a good growth since the recent rains. Weeds were also growing rapidly, and the second cultivation of the season has been in progress. The second spraying is now due. A hotbed has been made and is ready for softwood cuttings.

It appears there will be a fair to good set of most fruits. Early blooming varieties of plums, apples, and crabs were most severely damaged by the spring frosts. Many late blooming varieties of crabs escaped damage. Little or no damage was done to the blossoms of native fruits. Winter injury notes are now being taken. Most of the killing back is found on older trees and is probably due to drought rather than low winter temperatures. Often large limbs are found dead with the rest of the tree uninjured.

The final plantings in the garden were completed during the week. A nursery of 82 sweetcorn selections in the breeding project was completed. Cleaning up and mowing lawns about the grounds has been in progress. Bedding plants comprising geraniums, cannas, and coleus were set out during the last two days. Loniceras, Viburnums, Spireas, and Crataegus are in bloom about the grounds as are also some plantings of Darwin tulips.

Arboriculture - Collection of American and Chinese elm seed has occupied the greater part of the week. Heavy seed crops of both species were borne this year and an ample supply has been collected. Cultivation has commenced in the nursery, where weeds are now growing rapidly. The higher temperatures of the past few days have resulted in emerged seedlings starting to grow. Previous to this time no growth has been made after emergence. Conifer seed beds emerged during the week to good stands. Cutworm injury appears less severe than it was two weeks ago.

Agronomy - The past week was very favorable for all field work. The corn breeding nursery was planted, and more grass seeding was done in field P. All crops are growing well at present.

Flax was seeded in the main field and in the new grass rotations in the south field.

Young grasshoppers are numerous, especially in stubble and cultivated grasses. Poison bait has been spread, and a high kill resulted.

Temperatures have remained near normal or below, but the past few days have been somewhat warmer.

Maximum temperature, 75°; minimum, 36°; precipitation, 0.07 inch.

Cooperative Grazing Experiment - Steers were started on their pastures the first of the week. They averaged 514 pounds per head at the start.

Pastures have improved greatly since the rains. All pastures contain an abundance of feed at present.

BELLE FOURCHE:

The weather during the past week was comparatively warm for this spring. Light showers were received on four days, but the precipitation was negligible. Strong winds on the two warmest days were injurious to some crops. Spring sown small grains are beginning to suffer from lack of moisture. Winter grains are firing on all cultural treatments, except summer fallow, and winter rye is having difficulty in heading. Alfalfa has burned beyond recovery, except where the stand is thin, and crested wheatgrass is attempting to head at a heighth of about 8 inches. Corn is coming up.

Field work included duckfooting weeds, cultivating alleys, plowing winter rye and sweetclover under for green manure, and disking rye and potato plots. Sweetclover land was so dry and hard that it was necessary to plow 9 inches deep in order to keep the plow in the ground.

Maximum temperature, 80°; minimum, 40°; precipitation, 0.10 inch.

ARCHER:

During the week ending May 28 the temperatures increased and the sky cleared. Precipitation, varying from sprinkles to light showers, was recorded on six days of the week.

Vegetation made good growth. Winter rye on fallow is 30 inches high and is just beginning to head. Small spring grains are making satisfactory growth. The soil covering the corn listed before the heavy rain of May 20 is baked. Corn seeded in the rotation plots is germinating. The green ash trees are leafing.

During the week the millet, Sudan grass, and bean rotation plots were duckfooted and seeded, and the listing of corn in the dairy field was completed. An increase field of potatoes is being planted, and the millet ground in the dairy field is being duckfooted.

Mr. W. W. Bryan of the Queensland Agricultural College of Australia and Dr. A. C. Hildreth and Dr. H. M. Benedict of the Cheyenne Horticultural Field Station were station visitors May 24.

Maximum temperature, 74°; minimum, 39°; precipitation, 0.26 inch.

NORTH PLATTE:

Corn planting was completed during the week, and the first planting is emerging. The early date of seeding of sorghums was planted early in the week. The spring small grains continue to look good. No rain of any consequence has fallen during the week, and the winter wheat is beginning to show the need of moisture. Border effects are showing on the plots, and normal rainfall for June is necessary for a crop on cropped land, and there is inadequate moisture in the fallow plots to carry the wheat for many days. Soil sampling on the corn plots this week shows that there is damp soil to a depth of about 3 feet.

Winter wheat is heading, and that in the area of the dry land station hardest hit by hail last week is heading quite abnormally. The oats and barley in the hailed area which looked last week to be completely ruined have recovered to a point where some grain will be harvested although it will be somewhat late.

Maximum temperature, 86°; minimum, 45°; precipitation, 0.14 inch.

AKRON:

Beginning last Friday, drizzling rainfall was recorded on the next four consecutive days with a total of 1.69 inches for the period. There was no run-off from sod field or from worked land that was level cultivated. This brought the May rainfall to slightly more than the average, and greatly brightened the agricultural out-look.

Rotation fallow plots were plowed, or otherwise initially worked, it being possible to start this when worked soils were too wet. Corn plots, already worked for seeding, had to be reworked to break crust and prevent weeds from emerging concurrently with the crop which was planted by late Saturday afternoon. Essential heading notes were taken in the cereal nursery and variety experiments. While too wet for field work, many plot identification tags and stakes were placed in position.

Winter wheat is practically in head, and barley is showing the beards. Early Blackhull winter wheat in the variety experiment is blooming. First pustules of leaf rust were noted on winter wheat leaves during the week. Grasshoppers have hatched by myriads.

Maximum temperature, 93°; minimum, 42°; precipitation, 0.95 inch.

COLBY:

This is the first week this month that the temperatures have been up to normal. It has not been disagreeably hot, the maximum being 89° on Friday. It was an ideal week for field work. There was some cloudiness and not much wind.

The prospects for even a fair crop of small grains are rapidly fading out. Winter wheat started heading several days ago, but does not look as though it will ever head out under the present moisture conditions, even on the 3-year summer fallow. There is still a trace of moisture in the first foot on most plots, but the lower leaves are dried up, the whole plant is a deep blue with the upper leaves curled until they are sharp pointed with the tips turning brown. In all fields in this vicinity the stems show more or less

of transverse corrugations indicating frost injury. Nearly all fields are a sorry sight. In the north half of the county where nearly all the wheat was hailed there is no recovery, but rather deterioration. The spring small grains are beginning to head, but the lower leaves are drying fast. The winter wheat is generally about 18 inches high. The spring small grains are about 10 inches high.

The corn plots were planted this week. There was sufficient moisture in the seedbed on all plots, except those that had not been worked previously. Plot MCF was fairly dry because a good growth of tansy mustard had taken up most of the moisture. Plots 359B and 360B were also fairly dry because thistles had used most of the moisture.

Maximum temperature, 89°; minimum, 43°; precipitation, 0.09 inch.

HAYS:

The weather has been quiet and for the most part, partly cloudy, broken by spells of sunshine portions of the day. Rains kept the soil too wet for tillage most of the time. Only the last two days has the soil been dry enough for satisfactory tillage operations.

Wheat continues slowly developing. The height is above average. The prospects vary from 0 to 20 or 25 bushels in exceptional fields. Such prospects, however, are the exception and not the rule. Generally, wheat appeared to deteriorate during the early part of the week but has regained somewhat during the latter part aided by some sunshine and a light breeze. Its outcome hangs in the balance. Continued favorable weather may produce some fair yields on fallow. On cropland the wheat is not yet all headed, and leaf rust infestation is extremely heavy.

Barley is nearly all headed, oats are about 50 percent headed, and spring wheat is just beginning to show a few heads. These crops all look promising.

Bromegrass seeded last fall, where a stand was secured, is heading. Spring seeding shows an excellent stand and is from 3 to 6 inches high. It is the most promising for a permanent stand that has been secured within the last three or four years.

The second seeding of alfalfa is up to a good stand and looks very promising, although it is still very small and subject to the usual hazards that accompany a young alfalfa stand.

Canada field peas are about 12 inches high and making good growth.

Work during the latter part of the week has consisted of a rush to kill weeds on fallow plots and on all plots to be seeded to row crops. Also it has been necessary to cultivate roads and alleys and to repair drainage ditches. The east portion of field D, including one block of plots and a small portion of another block, was flooded with water backed up by State Highway No. 1 grade. This is the third time these plots have been flooded in the same manner since last wheat harvest. It is an unfortunate situation about which nothing can be done unless the highway department sees fit to substitute a bridge for a short stretch of grade. The flooding means a loss to us of the use of about 20 plots.

The station has been frequented by many visitors during the week, some of whom carry with them samples of wheat hoping to learn whether or not their wheat will make a crop.

Maximum temperature, 83°; minimum, 49°; precipitation, 0.97 inch.

GARDEN CITY:

Moisture conditions improved considerably this week, because on Saturday night and Sunday afternoon a total of 1.55 inches fell. The total rainfall thus far this month is 2.54 inches, which is only 0.11 inch under the normal. No dust storms have occurred since May 17, and the weather has been nearly perfect.

Weeds are making a rapid growth, and the thistles have almost completely covered what wheat there was. The wheat plots will therefore be cultivated to kill the thistle and wheat.

Maximum temperature, 86°; minimum, 49°; precipitation, 1.56 inches.

TUCUMCARI:

Continued dry weather, higher temperatures, and lower wind movement marked the past week. Precipitation for the year totals 2.92 inches, 60 percent of normal. Received this month, 0.35 inch. Surface soil is too dry for planting, but during the week a small number of cooperative plots were lister planted.

The grasshopper menace north and east of here is worse than anticipated. State aid is being applied for in both New Mexico and Texas. The northern end of this county is heavily infested, but continued efforts are proving very successful. Delegations of farmers and ranchers from all parts of the county are driving to Nara Visa, there offering their cars and drivers for operating poison spreaders. Some communities furnish cars for all spreaders as often as one day a week. This county response to what is at present a local infestation is the finest cooperative spirit shown in this area in many years.

Cultivation and hoeing trees, watering new trees, and cultivating plots and increase fields in anticipation of rain comprised the week's work.

Maximum temperature, 94°; minimum, 46°.

DALHART:

A rain of 1.24 inches on Sunday, the 22nd, gave a temporary relief from the drought. The rain fell in two parts. The first amounting to 1.10 inches fell in 35 minutes, and most of it fell in a period of 10 minutes. Some washing occurred, as the dry sand would not hold such a quantity of water. No planting has been done. Lister middles were broken the later part of the week in anticipation of planting soon after June 1.

The chief excitement now seems to be the urge to get the hordes of migratory grasshoppers poisoned. They have been hatching the past three weeks, and considerable alarm is expressed in the fear that the poisoning campaign may not be effective, as there seems to be so many hatching out.

Maximum temperature, 90°; minimum, 47°; precipitation, 1.24 inches.

BIG SPRING:

A rain totalling 0.66 inch was received May 27. Although this additional moisture was welcomed, the manner in which it fell was not appreciated. It came as a hard, dashing rain and covered cotton so deep that everything that was planted during the past week will have to be replanted. This was the first week that general planting throughout the county could be accomplished, and now it is probable that it will have to be started over again.

Two planters were kept busy on the station nearly all week. Cotton varieties, cotton spacing, cotton in the rotations, and kafir, corn, and broomcorn in the rotations were planted.

The years' cattle feeding experiments were closed out May 24 when the cattle were shipped to market.

J. H. Jones of the Texas Station, and George Barnes, beef cattle specialist of the Extension Service were here to assist in the final grading.

Maximum temperature, 98°; minimum, 58°; precipitation, 0.66 inch.

LAWTON:

Five rains, 2.28 inches, during the past two weeks interferred very seriously with field operations and brought the monthly total to 5.70 inches. Most of these rains were torrential, and the runoff on cultivated fields which were already well soaked and heavily crusted was excessive. Flood conditions were common in many instances in river territory, and severe hail damage and loss was frequently reported in many localities. Cotton and sorghum planting has been seriously delayed by gully-washing rains, and the fields are generally quite weedy.

One cannot travel in the wheat producing areas of the southwestern Oklahoma without encountering extensive hail damage. The hail storm reported May 6 started south west of Chillicothe, Texas, and ran in a north easterly direction more than 120 miles. Since that, the width of this hail belt has been widened from south to north in many instances.

The trade territory of Grandfield, Oklahoma, shipped 350,000 bushels of wheat in 1937. It is commonly agreed among growers and elevator men in this territory that not more than 25 percent of this amount will be shipped this year on account of a combination of hazards that include freeze, hail, army worm, wheat grub, leaf rust, wind, and rain injury.

Early Blackhull wheat, the earliest maturing variety in this part of the State, is the only thing that is ripe enough to cut, but the moisture content of the grain is still too high.

Wheat, in the Vernon and Chillicothe, Texas, areas is rapidly approaching maturity with a promise of good yields; hail injury is restricted to comparatively small areas, and stem rust will not likely reach epidemic proportions before harvest. Wheat harvest is just starting in the vicinity of Denton, Texas. Yield prospects are good with the possible exception of stem rust injury, which has developed into epidemic proportions within the past week. A few dead spots were observed in some of the fields. Harvest of a good winter oat crop in this territory is about completed. Spring seedings which are still very green will likley suffer severe rust injury.

Crossing the Red River at Gainsville, Texas and traveling north to Ardmore, Oklahoma and then west to Lawton, through a mixed farming area, one finds wheat and oats still very green with prospective yields that are problematical and quite spotted.

The chinch bug sorghum project planting was completed May 18, and fairly good stands were secured in spite of heavy rains and crusted surface soil. Cotton and cowpeas on the rotation plots were planted May 21. Cowpeas emerged to good stands but the cotton will have to be replanted. A cooperative cotton project, including 72 strains and varieties, quadruplicated, was planted May 27 and 28.

Maximum temperatures during the past two weeks ranged from 71° to 93°, and the minimum temperatures from 53° to 70°. The wind velocity was moderate except on 4 days.

Dr. K. S. Quisenberry, Division of Cereal Crops and Diseases, and Mr. Henry Dunlavey, A & M. College, Stillwater, Okla. were station visitors during the past week.

WOODWARD:

The fore part of the week was cool and rainy and the latter part was hot and dry, with very little wind during the period. Saturday night 0.21 inch of rain fell, and a slow steady rain continued most of the day Sunday, totaling 1.69 inches. Since the soil has so much moisture, a great portion of this was not retained. Clouds covered the sky most of the day Monday and part of Tuesday. Tuesday night 0.03 inch of rain fell.

Hot weather the last few days has made the wheat look yellowish gray from a distance, but when observed more closely it was found to be due to dead tips on the awns. The grain is in the milk stage.

Cotton, corn, and peanuts have begun growing very rapidly the last few warm days.

Approximately 40 farmers attended the field tour held Thursday for farmers. Considerable interest was shown in all the work.

Work on the station for the past week consisted of harvesting Austrian winter peas, cultivating nursery, cultivating corn, relisting lister-dammed plots, taking soil samples, cultivating fallow plots, planting nursery seed beds, and hybridizing grapes.

Maximum temperature, 86°; minimum, 51°; precipitation, 1.93 inches.

JUDITH BASIN:

With sufficient moisture, and timely showers throughout the week, growing conditions have been very good. Winter wheat and grasses have made excellent growth, and crop conditions in general are good with the exception of some very weedy fields of both spring and winter wheat.

Owing to crop growth and showers, soil blowing has been at a minimum.

Station work has consisted of preparing corn land and seeding of same on rotations and general field. Trimming roadways, cultivating shelterbelt, and vaccinating steers on pastures occupied the remainder of the week.

Visitors for the week were H. L. Dusenberry, County Agent of Judith Basin County and L. P. Reitz, Agent for Forage Crops and Diseases, Bozeman, Montana.

Maximum temperature, 82°; minimum, 42°; precipitation, 0.44 inch.

PENDLETON: (Report for week ending May 21, 1938.)

Temperatures during the week were higher than the week previous. As a result of the warmer weather, the spring wheat is showing better color and growing rapidly. Winter wheat is heading in most sections. The lower rainfall and shallow-land areas are in need of rain, some of the fall sown wheat is beginning to burn. Peas are making fine growth, good stands were secured by most farmers. Seeding of canning peas was completed in the foothill sections this week. Harvest of canning peas will probably start in the lower elevations about June 1.

Maximum temperature, 85°; minimum, 33°.

PENDLETON:

Hot weather prevailed most of the week, hastening the heading of fall sown wheat. Spring wheat is growing rapidly, it is about two weeks later than normal, while the fall wheat is about one week ahead of normal. Some burning is occurring on the shallow lands. Winter wheat on the station is now about 48 inches high, spring wheat is about 15 inches high. In the tillage trials the winter wheat on the deep plowed land averages at least 3 inches higher than the wheat on the shallow plowed land. The difference in height is quite apparent on all four dates of plowing. Based on a 7-year average the deep plowing has produced 3.5 bushels per acre more than shallow plowing.

Pea growers are busy dusting the borders of their fields for the pea weevil, a very heavy infestation of weevils prevails this year due to a very mild winter. Pea growers are using about 20 pounds of .75 percent rotenone dust per acre to control the weevil. The power dusters mounted on trucks with hoods to hold the dust close to the vines cover about 30 acres an hour. Pea varieties in bloom on the station were dusted on the 28th.

A grass field day was held on the afternoon of the 26th with a very fair crowd in attendance. There are about 200 grasses in the nursery, many of them are native, having been collected in various parts of eastern Oregon, Washington, Northern California and northern Nevada. Beardless wheat grass (Agropyron inerme) and Big Bluegrass (Poa ampla) are the outstanding grasses in the nursery.

M. A. McCall, Cereal Crops and Diseases, was a station visitor on May 22nd. V. B. Hawk, S. C. S. Pullman, Wash. spent two days in the grass nursery this week. E. R. Jackman, Extension Agronomist, Oregon State College, May 26th.

Maximum temperature, 89°; minimum, 40°; precipitation for May 0.69 inch. Normal for May 1.54 inches.